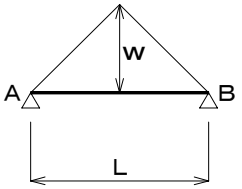
◎ＭおよびＱの算出計算式

☆三角荷重

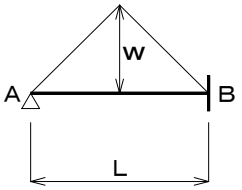
・両端ピン



$M_{max}=wL^2/12$

$Q_A=Q_B=wL/4$

・片端ピン片端固定



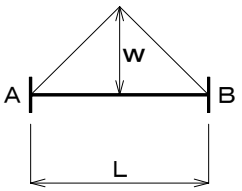
$M_B=5wL^2/64$

$M_{max}=11\sqrt{11}wL^2/768$

$Q_A=11wL/64$

$Q_B=21wL/64$

・両端固定



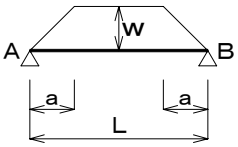
$M_A=M_B=5wL^2/96$

$M_{max}=wL^2/32$

$Q_A=Q_B=wL/4$

☆台形荷重

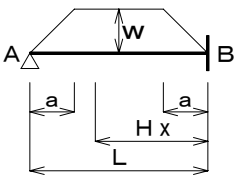
・両端ピン



$M_{max}=w(3L^2-4a^2)/24$

$Q_A=Q_B=w(L-a)/2$

・片端ピン片端固定



$M_B=w(L^3-2a^2L+a^3)/8L$

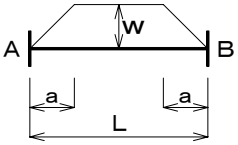
$Q_A=w(3L^3-4aL^2+2a^2L-a^3)/8L^2$

$Q_B=w(5L^3-4aL^2-2a^2L+a^3)/8L^2$

最大Ｍ距離 $Hx=Q_B/w+a/2$

$M_{max}=Q_BHx-w(3Hx^2-3aHx+2a)/6-M_B$

・両端固定



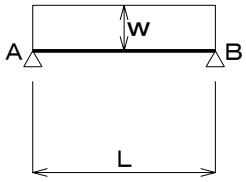
$M_A=M_B=w(L^3-2a^2L+a^3)/12L$

$M_{max}=w(L^3/2-a^3)/12L$

$Q_A=Q_B=w(L-a)/2$

☆等分布荷重

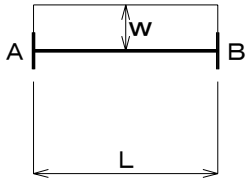
・両端ピン



$M_{max} = wL^2 / 8$

$Q_A = Q_B = wL / 2$

・両端固定



$M_A = M_B = wL^2 / 12$

$Q_A = Q_B = wL / 2$